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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

JEFFERY, JOHN A

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/719,694	Applicant(s) CRAW ET AL.	
	Examiner John A. Jeffery	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-18, 20-23 and 25-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 17, 18, 33, 36, 37, 39, 53, 56 and 57 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13, 15, 16, 20-23, 25-32, 34, 35, 38, 40-52, 54 and 55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Title of Invention

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Ventilating and Heating Apparatus With Heater Shielded by Tapered Discharge Duct."

Abstract

The abstract of the disclosure is objected to because of the following informalities:

(1) The first sentence is incomplete and must be rewritten to form a complete sentence.

(2) The abstract must include a brief description of the feature claimed in claim 38 (recessed edges of cover).

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this action:

A person shall be entitled to a patent unless -

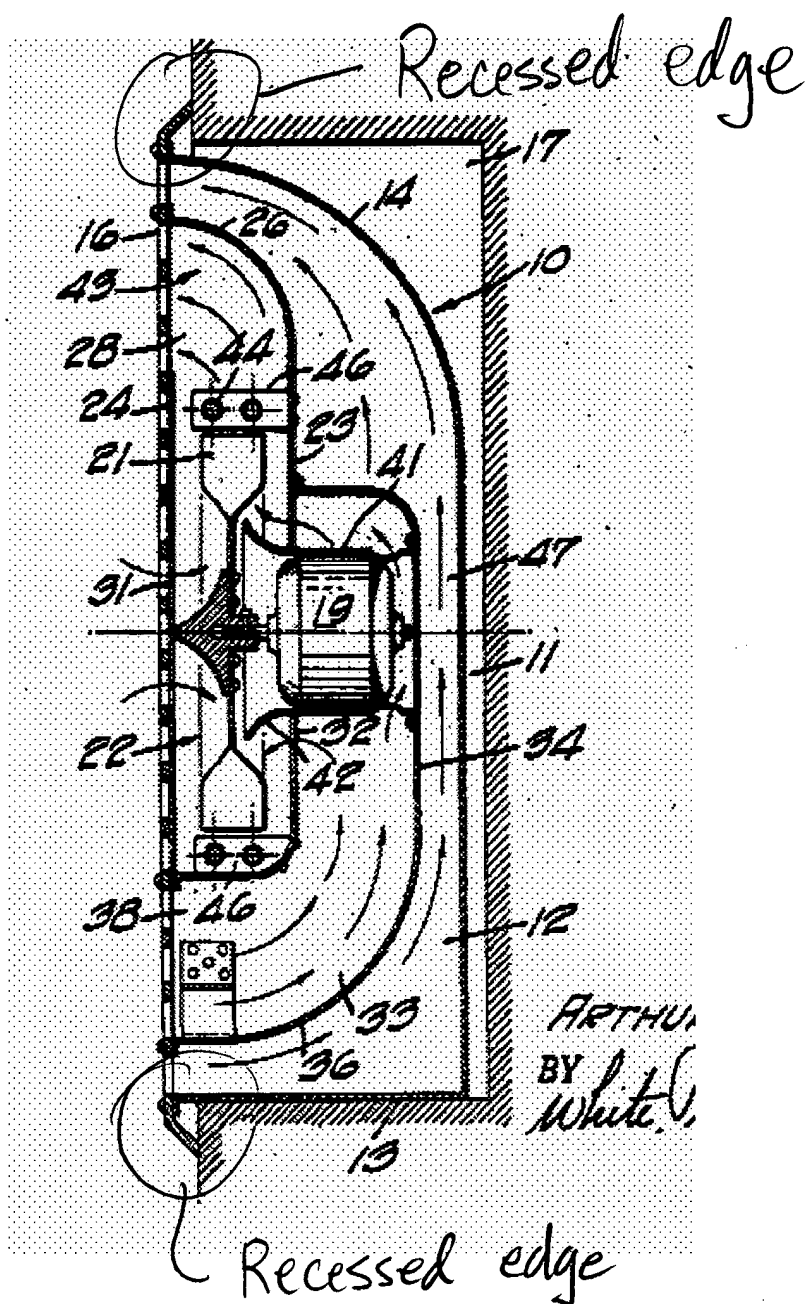
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 8, and 9 are rejected under 35 USC 102(b) as being anticipated by Karg (US 1,644,595). Karg (US 1,644,595) discloses a ventilating and heating apparatus comprising main housing 7, fan housing 52, and fan 47 located within fan housing 52. Air is directed through discharge duct 48 and exits via discharge outlet 56. Electric heater 41 is located within the discharge duct and is "shielded" from discharge outlet by walls 53 and 54 of the discharge duct. The heater is located in a substantially straight portion of the discharge duct. See Figs. 5-7. Although the heater extends above and below the duct's substantially straight portion, it is nevertheless located in the straight portion as well.

Regarding claim 9, note that the cross sectional area of the discharge duct is tapered towards the discharge outlet. See Page 2, lines 51-79.

Claims 38, 40-43, and 45 are rejected under 35 USC 102(b) as being anticipated by Kercher (US 1,982,139). Kercher (US 1,982,139) discloses a ventilating and heating apparatus comprising main housing 10, fan housing disposed in the main housing with discharge duct 26, heater 44 secured within the discharge duct having discharge outlet 43. See Figs. 1 and 2. A screened cover 16 has a "discharge aperture" that encompasses the outlets of both ducts 26 and 14; thus, the cover's discharge aperture has a larger cross-sectional area than discharge outlet 43. In addition, Kercher (US 1,982,139) recesses the edges of screened cover 16 with respect to the discharge outlet 43. See Fig. 2 of Kercher (US 1,982,139) which has been enlarged and annotated for clarity.

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Joint Inventors -- Common Ownership Presumed

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103, the examiner presumes that the subject matter of the

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various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligations under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103.

Claim Rejections - 35 U.S.C. § 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 7, 20-23, and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Eisele (US 3,025,382). The claims differ from the previously cited prior art in calling for removably securing the heater in the discharge duct. But removably securing electric heaters within discharge ducts is well known in the art. Eisele (US 3,025,382), for example, secures an electric heater within a duct 22 via brackets 32, 42 and removable fasteners 36, 44. See Fig. 2 and col. 2, lines 16-39. Such a mounting enables the heater to be easily removed from the duct for repair or replacement. In view of Eisele (US 3,025,382), it would have been

obvious to one of ordinary skill in the art at the time of the invention to removably mount the electric heater in the duct of the previously described apparatus so that the heater is easily removed from the duct for repair or replacement.

Regarding claims 20-23, although Karg (US 1,644,595) does not disclose the exact ratios of cross-sectional area claimed, such ratios merely are the result of optimization of result-effective variables readily discoverable by routine experimentation by skilled artisans. It is well settled that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233,235 (CCPA 1955). Here, because the general conditions of the claim are met by the prior art, namely a difference in cross-sectional area, the specific ratio of cross-sectional areas claimed is merely an optimization readily discoverable via routine experimentation and does not therefore constitute a patentably distinguishable feature.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Steingruber (US 2,445,250). The claim differs from the previously cited prior art in calling for an illumination device coupled to the main housing. But providing an illumination device in a main housing of a convection heater is conventional and well known in the art as evidenced by Steingruber (US 2,445,250) noting lamp 64 in Fig. 2. As noted in col. 5, line 68 – col. 2 and col. 8, lines 13-23, the lamp 64 not only provides a glow effect that creates the illusion of an open flame when viewed from the front of the heater, it also provides a signal to the user that power is on.

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In view of Steingruber (US 2,445,250), it would have been obvious to one of ordinary skill in the art at the time of the invention to provide an illumination device coupled to the main housing in the previously described apparatus to (1) produce a glow effect that creates the illusion of an open flame when viewed from the front of the heater, and (2) visually alert the user that power is on.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Eisele and further in view of Steingruber (US 2,445,250). The claim differs from the previously cited prior art in calling for an illumination device coupled to the main housing. But providing an illumination device in a main housing of a convection heater is conventional and well known in the art as evidenced by Steingruber (US 2,445,250) noting lamp 64 in Fig. 2. As noted in col. 5, line 68 – col. 2 and col. 8, lines 13-23, the lamp 64 not only provides a glow effect that creates the illusion of an open flame when viewed from the front of the heater, it also provides a signal to the user that power is on. In view of Steingruber (US 2,445,250), it would have been obvious to one of ordinary skill in the art at the time of the invention to provide an illumination device coupled to the main housing in the previously described apparatus to (1) produce a glow effect that creates the illusion of an open flame when viewed from the front of the heater, and (2) visually alert the user that power is on.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of CA679120. The claim differs from the previously cited prior

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art in calling for removably coupling the fan housing to the main housing by engaging at least one protrusion on the fan housing with at least one aperture on the main housing.

But removably mounting fan housings to main housings is well known in the art.

CA679120, for example, removably mounts a fan housing 21 by engaging fan housing protrusions 23 with corresponding apertures 24 on plates 17, 18 that are part of the main housing. See Figs. 1 and 2. As noted on Page 7, lines 15-20, such a mounting enables removal of the blower for servicing. In view of CA679120, it would have been obvious to one of ordinary skill in the art at the time of the invention to removably mount the fan housing to the main housing of the previously described apparatus to enable removal of the blower for repair or replacement.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Eisele and further in view of CA679120. The claim differs from the previously cited prior art in calling for removably coupling the fan housing to the main housing by engaging at least one protrusion on the fan housing with at least one aperture on the main housing. But removably mounting fan housings to main housings is well known in the art. CA679120, for example, removably mounts a fan housing 21 by engaging fan housing protrusions 23 with corresponding apertures 24 on plates 17, 18 that are part of the main housing. See Figs. 1 and 2. As noted on Page 7, lines 15-20, such a mounting enables removal of the blower for servicing. In view of CA679120, it would have been obvious to one of ordinary skill in the art at the time of the invention

to removably mount the fan housing to the main housing of the previously described apparatus to enable removal of the blower for repair or replacement.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Hynes (US 1,991,280). The claims differ from the previously cited prior art in calling for a first dividing wall to separate the main housing into first and second compartments with the ventilation fan assembly and an electrical compartment disposed in the first compartment. But dividing a main heater housing to form multiple compartments is well known in the art. Hynes (US 1,991,280), for example, discloses providing a "first dividing wall" in the main housing 15 thus forming a motor chamber 16 ("first compartment") and a heater chamber 17 ("second compartment"). See Fig. 1 and P. 1, col. 2, lines 17-40. As best seen in Fig. 1, the motor chamber 16 contains a ventilation fan assembly M and an electrical compartment enclosing electrical wiring located above the fan assembly. By physically separating the components, the fan motor and electrical compartment is protected from intense heat generated by the heating elements. In view of Hynes (US 1,991,280), it would have been obvious to one of ordinary skill in the art at the time of the invention to divide the main housing and locate the fan assembly and electrical compartment in one compartment in the previously described apparatus to protect the fan motor and electrical compartment from heat generated by the heating elements.

Regarding claim 16, the scope of the claim language did not preclude the "second dividing wall" 19 of Hynes (US 1,991,280) that partially subdivides the heater

compartment ("second compartment") into sub-compartments located on either side of wall 19. Moreover, note electrical wiring in Fig. 1 that penetrates the wall separating the motor and heater compartments thus entering the "second sub-compartment" as claimed.

Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Eisele and further in view of Hynes (US 1,991,280). The claims differ from the previously cited prior art in calling for a first dividing wall to separate the main housing into first and second compartments with the ventilation fan assembly and an electrical compartment disposed in the first compartment. But dividing a main heater housing to form multiple compartments is well known in the art. Hynes (US 1,991,280), for example, discloses providing a "first dividing wall" in the main housing 15 thus forming a motor chamber 16 ("first compartment") and a heater chamber 17 ("second compartment"). See Fig. 1 and P. 1, col. 2, lines 17-40. As best seen in Fig. 1, the motor chamber 16 contains a ventilation fan assembly M and an electrical compartment enclosing electrical wiring located above the fan assembly. By physically separating the components, the fan motor and electrical compartment is protected from intense heat generated by the heating elements. In view of Hynes (US 1,991,280), it would have been obvious to one of ordinary skill in the art at the time of the invention to divide the main housing and locate the fan assembly and electrical compartment in one compartment in the previously described apparatus to protect the fan motor and electrical compartment from heat generated by the heating elements.

Regarding claim 35, the scope of the claim language did not preclude the "second dividing wall" 19 of Hynes (US 1,991,280) that partially subdivides the heater compartment ("second compartment") into sub-compartments located on either side of wall 19. Moreover, note electrical wiring in Fig. 1 that penetrates the wall separating the motor and heater compartments thus entering the "second sub-compartment" as claimed.

Claims 11, 12, 38, 40-43, and 45-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Kercher (US 1,982,139). The claims differ from the previously cited prior art in calling for a cover with a discharge aperture with a larger cross-sectional area than the fan housing discharge outlet such that the cover's edges that define a periphery of the discharge aperture are recessed with respect to the discharge outlet. But providing covers with such edge structures are well known in the art. Kercher (US 1,982,139), for example, discloses recessing the edges of screened cover 16 with respect to the discharge outlet 43. Such a structure not only protects the interior components from damage and inadvertent contact, but also minimizes overheating of its edges.

In view of Kercher (US 1,982,139), it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a screened cover with recessed edges in the previously described apparatus to not only protect the interior components from damage and inadvertent contact, but also minimizes overheating of its edges.

Regarding claims 47-50, although Karg (US 1,644,595) does not disclose the exact ratios of cross-sectional area claimed, such ratios merely are the result of optimization of result-effective variables readily discoverable by routine experimentation by skilled artisans. It is well settled that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233,235 (CCPA 1955). Here, because the general conditions of the claim are met by the prior art, namely a difference in cross-sectional area, the specific ratio of cross-sectional areas claimed is merely an optimization readily discoverable via routine experimentation and does not therefore constitute a patentably distinguishable feature.

Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Eisele and further in view of Kercher (US 1,982,139). The claims differ from the previously cited prior art in calling for a cover with a discharge aperture with a larger cross-sectional area than the fan housing discharge outlet such that the cover's edges that define a periphery of the discharge aperture are recessed with respect to the discharge outlet. But providing covers with such edge structures are well known in the art. Kercher (US 1,982,139), for example, discloses recessing the edges of screened cover 16 with respect to the discharge outlet 43. Such a structure not only protects the interior components from damage and inadvertent contact, but also minimizes overheating of its edges.

In view of Kercher (US 1,982,139), it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a screened cover with recessed edges in the previously described apparatus to not only protect the interior components from damage and inadvertent contact, but also minimizes overheating of its edges.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Kercher (US 1,982,139) and further in view of Eisele (US 3,025,382). The claim differs from the previously cited prior art in calling for removably securing the heater in the discharge duct. But removably securing electric heaters within discharge ducts is well known in the art. Eisele (US 3,025,382), for example, secures an electric heater within a duct 22 via brackets 32, 42 and removable fasteners 36, 44. See Fig. 2 and col. 2, lines 16-39. Such a mounting enables the heater to be easily removed from the duct for repair or replacement. In view of Eisele (US 3,025,382), it would have been obvious to one of ordinary skill in the art at the time of the invention to removably mount the electric heater in the duct of the previously described apparatus so that the heater is easily removed from the duct for repair or replacement.

Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Kercher (US 1,982,139) and further in view of Steingruber (US 2,445,250). The claim differs from the previously cited prior art in calling for an illumination device coupled to the main housing. But providing an illumination device in

a main housing of a convection heater is conventional and well known in the art as evidenced by Steingruber (US 2,445,250) noting lamp 64 in Fig. 2. As noted in col. 5, line 68 – col. 2 and col. 8, lines 13-23, the lamp 64 not only provides a glow effect that creates the illusion of an open flame when viewed from the front of the heater, it also provides a signal to the user that power is on. In view of Steingruber (US 2,445,250), it would have been obvious to one of ordinary skill in the art at the time of the invention to provide an illumination device coupled to the main housing in the previously described apparatus to (1) produce a glow effect that creates the illusion of an open flame when viewed from the front of the heater, and (2) visually alert the user that power is on.

Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Kercher (US 1,982,139) and further in view of CA679120. The claim differs from the previously cited prior art in calling for removably coupling the fan housing to the main housing by engaging at least one protrusion on the fan housing with at least one aperture on the main housing. But removably mounting fan housings to main housings is well known in the art. CA679120, for example, removably mounts a fan housing 21 by engaging fan housing protrusions 23 with corresponding apertures 24 on plates 17, 18 that are part of the main housing. See Figs. 1 and 2. As noted on Page 7, lines 15-20, such a mounting enables removal of the blower for servicing. In view of CA679120, it would have been obvious to one of ordinary skill in the art at the time of the invention to removably mount the fan housing to the main housing of the

previously described apparatus to enable removal of the blower for repair or replacement.

Claims 54 and 55 rejected under 35 U.S.C. 103(a) as being unpatentable over Karg (US 1,644,595) in view of Kercher (US 1,982,139) and further in view of Hynes (US 1,991,280). The claims differ from the previously cited prior art in calling for a first dividing wall to separate the main housing into first and second compartments with the ventilation fan assembly and an electrical compartment disposed in the first compartment. But dividing a main heater housing to form multiple compartments is well known in the art. Hynes (US 1,991,280), for example, discloses providing a "first dividing wall" in the main housing 15 thus forming a motor chamber 16 ("first compartment") and a heater chamber 17 ("second compartment"). See Fig. 1 and P. 1, col. 2, lines 17-40. As best seen in Fig. 1, the motor chamber 16 contains a ventilation fan assembly M and an electrical compartment enclosing electrical wiring located above the fan assembly. By physically separating the components, the fan motor and electrical compartment is protected from intense heat generated by the heating elements. In view of Hynes (US 1,991,280), it would have been obvious to one of ordinary skill in the art at the time of the invention to divide the main housing and locate the fan assembly and electrical compartment in one compartment in the previously described apparatus to protect the fan motor and electrical compartment from heat generated by the heating elements.

Regarding claim 55, the scope of the claim language did not preclude the "second dividing wall" 19 of Hynes (US 1,991,280) that partially subdivides the heater compartment ("second compartment") into sub-compartments located on either side of wall 19. Moreover, note electrical wiring in Fig. 1 that penetrates the wall separating the motor and heater compartments thus entering the "second sub-compartment" as claimed.

Allowable Subject Matter

Claims 14, 17, 18, 33, 36, 37, 39, 53, 56, and 57 are allowable over the art of record.

Response to Arguments

Applicant's arguments have been considered but are deemed to be moot in view of the new grounds of rejection. The examiner, however, will respond to certain arguments raised by applicant.

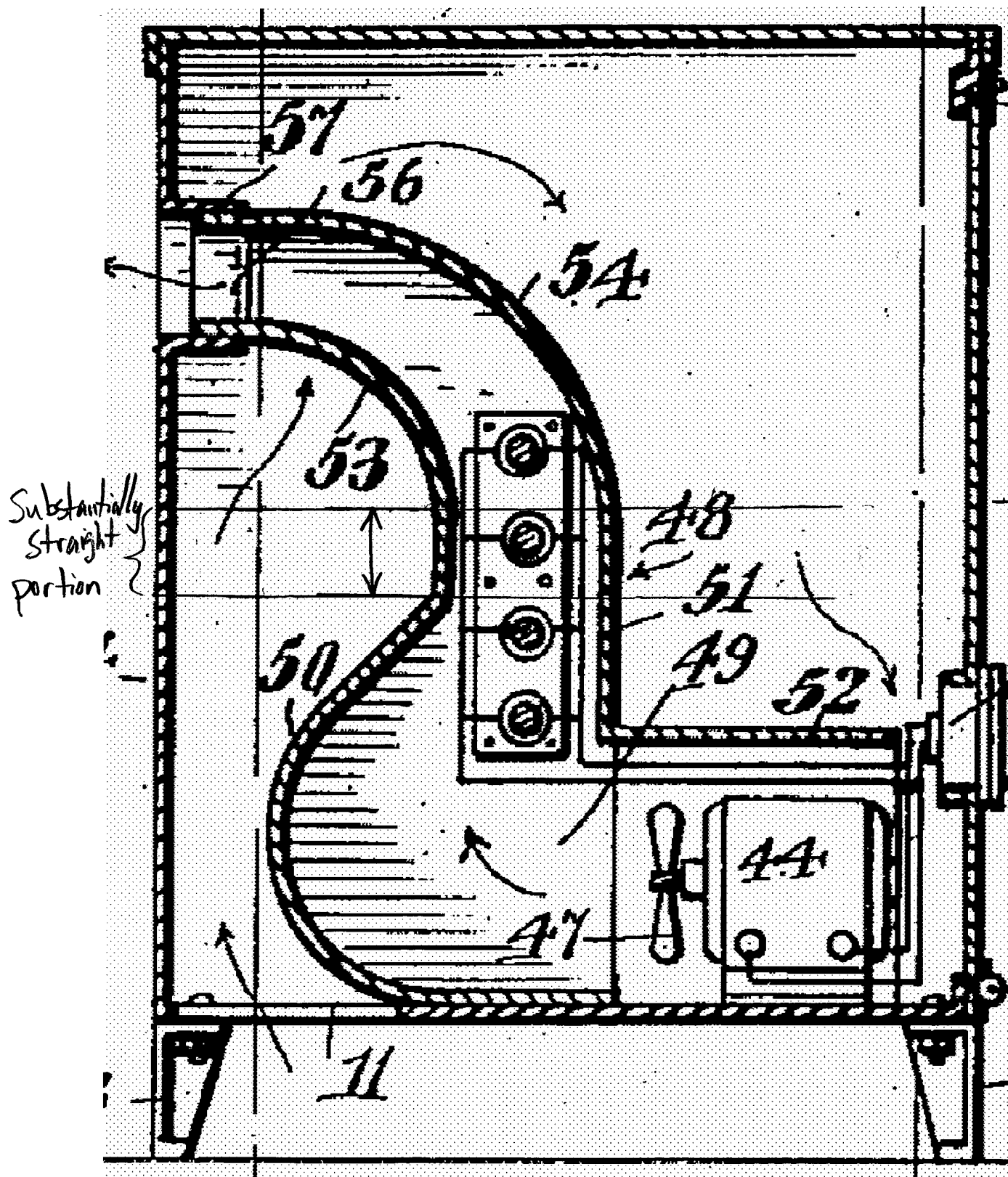
Karg Fully Reads on Claim 1 as Amended

Applicant argues that because Karg's heating unit 41 extends both above and below a "very small" substantially straight portion, it is allegedly not located in a substantially straight portion of the duct. Remarks, at 27. The examiner, however, respectfully disagrees.

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First, as applicant admits, a substantially straight portion exists in Karg's discharge duct. The examiner has enlarged and annotated Fig. 5 of Karg below to clarify where this region is located.

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As noted in the rejection, although Karg's substantially straight portion is relatively small compared to the remainder of the duct, the heater is nevertheless in the substantially straight portion. Merely because some heater portions fall outside the substantially straight portion does not mean that the heater is not in the straight portion.

The claims as amended do not require that the heater be located entirely in the substantially straight portion. Rather, the claims merely call for the heater to be "in the substantially straight portion" -- a limitation fully met by Karg.

Kercher Fully Reads on Claim 38

Applicant argues that Kercher's recessed edge is the edge of grille 16 in its entirety and not the edge of the discharge opening 28. Remarks, at 29. But the scope and breadth of the claim does not preclude the citation of Kercher. The "recessed edges" of Kercher noted in the annotated figure define a periphery of the cover's discharge aperture as claimed. Furthermore, Kercher discloses a screened cover 16 has a "discharge aperture" that encompasses the outlets of both ducts 26 and 14; thus, the cover's discharge aperture has a larger cross-sectional area than discharge outlet 43. In addition, Kercher (US 1,982,139) recesses the edges of screened cover 16 with respect to the discharge outlet 43. The rejection is proper.

The 37 CFR 1.132 Declaration Does Not Overcome the Obviousness Rejection

The examiner has fully considered applicant's allegations of unexpected results in the Declaration of Kenneth J. Jonas under 37 CFR 1.132 ("Jonas Declaration"). The

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examiner appreciates applicant's descriptions and comparisons of the five designs where only the fifth design achieved the unexpected results in (1) eliminating "red spots", (2) improving outlet air velocity, and (3) eliminating resonance. Achieving these results with the fifth design was apparently achieved by tapering the cross-sectional area from the heater to the outlet within the claimed range of cross-sectional area ratios. Jonas Declaration, at 2-3.

The declaration, however, fails to outweigh the evidence of obviousness. First, the Jonas Declaration fails to compare the claimed subject matter to the closest prior art. It is well settled that an affidavit or declaration under 37 CFR 1.132 must compare the claimed subject matter with the closest prior art to effectively rebut a prima facie case of obviousness. In re Burckel, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979). See also MPEP 716.02(e).

In the rejections, the examiner noted that Karg tapers the cross sectional area of the discharge duct towards the discharge outlet. See Krag, Page 2, lines 51-79. Although Karg is silent regarding the degree of taper from the heater to the outlet, Karg nonetheless teaches the general conditions of the claim -- namely tapering the duct. Although Karg did not discuss the specific degree of tapering or advantages of such tapering, the particular degree of tapering would amount to merely optimizing the general taper of Karg as desired.

On this record, it is not at all apparent that the degree of tapering claimed provides any unexpected results over the taper in Karg. Moreover, the record does not

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reflect that the tapered structure of Karg would not necessarily achieve commensurate results alleged to be unexpected in the Jonas declaration.

Final Rejection

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

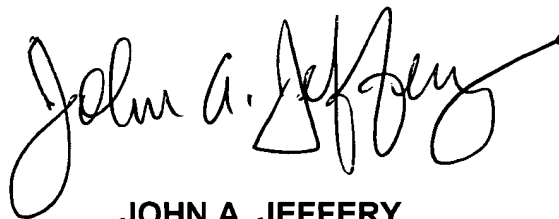
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Jeffery whose telephone number is (571) 272-4781. The examiner can normally be reached on Tuesday - Friday from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans, can be reached on (571) 272-4777. All faxes should be sent to the centralized fax number at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "John A. Jeffery", with a stylized flourish at the end.

**JOHN A. JEFFERY
PRIMARY EXAMINER**

3/31/06